

Please change, on page 18, in line 7, the word "tyres" to --tires--.

Please change, on page 18, in line 10, the word "tyre" to --tire--.

Please change, on page 18, in line 11, the word "tyre" to --tire--.

Please change, on page 19, in line 9, the word "tyre" to --tire--.

Please change, on page 21, in line 7, the word "tyre" to --tire--.

Please change, on page 21, in line 8, the word "tyre" to --tire--.

Please change, on page 21, in line 10, the word "tyre" to --tire--.

Please change, on page 21, in line 11, the word "tyres" to --tires--.

Please change, on page 21, in line 14, the word "tyres" to --tires--.

In the Claims

Please amend claims 1-11, 13-16, and 19. Claims 12, 17, and 18 have been provided for completeness.

1. (Amended) A battery-powered [tyre] tire pressure sensor, comprising:
a pressure transducer for sensing a pressure of a [tyre] tire and providing a [tyre] tire pressure signal;
a transmitter;
a signal processor connected to the pressure transducer for providing a signal dependent on the [tyre] tire pressure signal to the transmitter; and
a timing circuit connected to the signal processor which is configured to automatically switch the [tyre] tire pressure sensor on periodically for a predetermined interval to measure the [tyre] tire pressure and switch off the [tyre] tire pressure sensor at all other times to conserve battery power in which the timing circuit comprises a timer and a switch, the timer being configured to periodically

actuate the switch and thereby connect the pressure sensor to the battery to turn the [tyre] tire pressure sensor on for said predetermined interval.

2. (Amended) A battery-powered [tyre] tire pressure sensor according to claim 1, further comprising a non-volatile memory device for storing an identification code used to identify transmissions from the pressure sensor.

3. A battery-powered [tyre] tire pressure sensor according to claim 2, in which the non-volatile memory device also stores calibration information which is used to determine the [tyre] tire pressure.

4. (Amended) A battery-powered [tyre] tire pressure sensor according to [any preceding] claim 1, further comprising a temperature transducer connected to the signal processor to provide a temperature signal to the signal processor, wherein the signal processor is adapted to apply a temperature compensation to the [tyre] tire pressure signal in dependence on the temperature signal.

5. (Amended) A battery-powered [tyre] tire pressure sensor according to [any preceding] claim 1, in which the signal processor is a microcontroller having an embedded computer program for controlling the operation of the pressure sensor.

6. (Amended) A battery-powered [tyre] tire pressure sensor according to claim 5, in which the microcontroller is configured to record battery voltage and operating temperature each time it makes a pressure measurement and, when necessary, encode this information together with the pressure sensor identification code for transmission via the transmitter.

7. (Amended) A battery-powered [tyre] tire pressure sensor according to [any preceding] claim 1, in which the transmitter comprises a surface acoustic wave (SAW) resonator.

8. (Amended) A battery-powered [tyre] tire pressure sensor according to [any preceding] claim 1, configured so that it does not make any transmissions until it is connected to an inflated [tyre] tire.

9. (Amended) A battery-powered [tyre] tire pressure sensor according to [any preceding] claim 1, adapted to be screwed onto the valve stem of a vehicle [tyre] tire.

10. (Amended) A remote [tyre] tire pressure monitoring system for mounting on a vehicle, comprising a plurality of [tyre] tire pressure sensors according to [any preceding] claim 1 in combination with a cab unit for mounting within the vehicle cab, the cab unit comprising:
a receiver for detecting transmissions from the respective transmitters of the [tyre] tire pressure sensors; and,
a display for providing a driver with information about the [tyres] tires on the vehicles in dependence on the received transmissions from the pressure sensors.

11. (Amended) A transponder unit for use in a remote [tyre] tire pressure monitoring system for a vehicle which includes a plurality of remote [tyre] tire pressure sensors connected to respective [tyres] tires, wherein each pressure sensor is adapted to transmit a signal with information about the condition of its respective [tyre] tire, the transponder unit comprising:
a receiver for receiving the transmitted signals from the individual pressure sensors;

a signal processor for processing signals from the pressure sensors and generating a coded signal for transmission which identifies the transponder unit and [tyre] tire location; and,
a transmitter for transmitting the coded signal to a remote receiver where information can be displayed to a driver about the [tyres] tires associated with the transponder unit.

12. A transponder unit according to claim 11, further comprising a memory to store a unique identification code to identify the transponder unit.

13. (Amended) A remote [tyre] tire pressure monitoring system comprising a transponder unit according to claim 11 [or 12], in combination with a cab unit, the cab unit comprising:
a receiver for receiving the coded signal from the transponder unit;
a signal processor for detecting and decoding the coded signal; and,
a display for providing the driver with information about the condition of the [tyres] tires associated with the transponder unit.

14. (Amended) A remote [tyre] tire pressure monitoring system according to claim 13, further comprising a vehicle trailer on which the transponder unit is mounted.

15. (Amended) A remote [tyre] tire pressure monitoring system according to claim 13 [or 14], in which the remote [tyre] tire pressure sensors are battery-powered [tyre] tire pressure sensors [according to any of claims 1 to 9], each battery-powered tire pressure sensor comprising:
a pressure transducer for sensing a pressure of a tire and providing a tire pressure signal;
a transmitter;

a signal processor connected to the pressure transducer for providing a signal dependent on the tire pressure signal to the transmitter; and
a timing circuit connected to the signal processor which is configured to automatically switch the tire pressure sensor on periodically for a predetermined interval to measure the tire pressure and switch off the tire pressure sensor at all other times to conserve battery power in which the timing circuit comprises a timer and a switch, the timer being configured to periodically actuate the switch and thereby connect the pressure sensor to the battery to turn the tire pressure sensor on for said predetermined interval.

16. (Amended) A vehicle comprising a cab unit and a trailer unit connectable to the cab unit, comprising a remote [tyre] tire pressure monitoring system according to [any of] claim[s] 13 [to 15].

17. A vehicle according to claim 16, in which the transponder unit is responsive to transmit an identification signal to the remote receiver when power is first supplied to the transponder unit.

18. A vehicle according to claim 17, in which power is supplied to the transponder unit by activation of the vehicle brake light line.

19. (Amended) A vehicle according to [any of] claim[s] 16 [to 18], wherein the receiver of the transponder unit has a processor programmed to recognise transmissions from sensors connected to wheels of the trailer and ignore all others.

In the Diagrams